



OFFICE EQUIPMENT ACQUISITION AND MAINTENANCE

**From The Office Of State Auditor
Claire McCaskill**

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PERFORMANCE AUDIT



Office of
Missouri State Auditor
Claire McCaskill

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Copy machine maintenance costs could be reduced and increased oversight needed of state computer hardware purchases

The Office of Administration (OA) oversees the statewide contract for copy machine maintenance agreements. These maintenance agreements are priced based on a maximum number of copies per month, referred to as a base level. In addition, OA oversees the prime vendor contract for state purchases of computer hardware and peripheral equipment. Purchases through the prime vendor totaled approximately \$26.5 million in fiscal year 2003. This audit focused on copy machine maintenance agreement contracts as well as the contract for state computer hardware and peripherals.

Most maintenance and rental agreements were not cost-effective due to excessive base levels or non-statewide contracts

Auditors found maintenance and rental agreements were not cost-effective for 86 percent of the 77 copy machine agreements reviewed. Of the contracts reviewed, entities could have saved an estimated \$43,900 of the \$108,100 annual maintenance expenditures had more cost-effective agreements been used for these copy machines. (See page 3)

Agreements purchased outside the statewide contract proved more costly

None of the maintenance agreements purchased outside the statewide contract for the 30 copy machines reviewed were cost-effective. Entities could have saved an estimated 57 percent in annual maintenance costs by using the statewide contract. (See page 4)

Statewide contract did not offer base level options for all copy machines

In most cases, state entities paid more for maintenance agreements when the state contract offered only one base level than if various base levels had been available. Entities could have saved an estimated 48 percent in annual maintenance costs for 11 of 15 copy machines reviewed if various base levels had been available. In addition, auditors found agreements for two of three rental copy machines reviewed had base levels higher than the average actual usage. (See page 5)

Infrequent bidding hindered competitive prices for computer hardware and peripheral equipment

OA extended the prime vendor statewide contract for computer hardware and peripheral equipment for almost seven years without competitive bids and, as a result, did not ensure it obtained the lowest prices possible. (See page 8)

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ABBREVIATION

OA Office of Administration



CLAIRE C. McCASKILL
Missouri State Auditor

Honorable Bob Holden, Governor
and
Jacquelyn D. White, Commissioner
Office of Administration
Jefferson City, MO 65102

Office equipment is an essential part of state operations. To determine whether state entities effectively and efficiently procured this equipment and related maintenance, we focused on Office of Administration and state entity policies and procedures designed to monitor these purchases. Our objectives were to determine (1) if copy machine maintenance agreements were cost effective, and (2) whether computer equipment was procured in the most cost-effective manner.

We found most state entities spent more than necessary on copy machine maintenance agreements. In addition, the state may be paying too much for computer hardware and peripherals under its current statewide contract.

We conducted our work in accordance with applicable standards contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, and included such tests of the procedures and records as were considered appropriate under the circumstances. In this regard, we reviewed applicable state statutes, statewide contracts related to office machines, articles from various periodicals, and audit reports from other states related to office machine acquisition. We also interviewed state personnel and statewide contract copier maintenance service provider representatives.

Claire C. McCaskill
State Auditor

The following staff contributed to this report:

| | |
|---------------------|-------------------|
| Director of Audits: | Kirk R. Boyer |
| Audit Manager: | Peggy Schler, CPA |
| Auditor-in-Charge: | Marty Beck |
| Audit Staff: | Chad Hampton |
| | Marty Carter |

RESULTS AND RECOMMENDATIONS

1. Copy Machine Maintenance Costs Could Have Been Reduced

State entities¹ have paid more than necessary for copy machine maintenance services. This situation has occurred because (1) the Office of Administration (OA) did not ensure more than one base level was provided for maintenance contracts related to copy machines that were available for purchase from statewide contracts, and (2) state entities did not contract for maintenance services which closely reflected actual usage for copy machines which are no longer available for purchase where more than one base level was available. Most entities failed to perform and/or document cost benefit analyses of maintenance level alternatives. Some entities purchased maintenance agreements outside the statewide contract. In addition, the statewide contract did not offer various base levels based on expected usage for copy machines rented by state entities. Entities were also not always aware they had the option to change base level options.

Background

State entities are generally required to purchase copy machines from a mandatory statewide contract which provides several models to choose from. Each model has an optional maintenance agreement which specifies a maximum number of copies per month, referred to as a base level. There is a fixed cost per month for the base level and any overage is calculated on a cost per copy rate. The base level of copies for each model varies and generally increases as the copying speed and/or features of the copy machine models increase. For example, an entity may need a copy machine with particular features or a higher speed which has a specified base amount of 30,000 copies per month while the actual volume of copies per month may be far less.

Additionally, state entities are generally required to purchase maintenance agreements from a mandatory statewide copy machine maintenance contract for copy machine models that are no longer available for purchase on statewide contract. The contract provides various base levels for each copy machine model, allowing the entities to select a base level which corresponds to actual usage amounts.

Methodology

Absent a statewide database on copy machines owned or rented by state entities, we surveyed 132 state entities to determine the number of copy machines and related utilization procedures. Survey respondents identified 2,990 copy machines and provided a listing of copy machines owned, rented, and/or leased. To determine copy machine maintenance and rental cost effectiveness, we selected 102 copy machines located at various state entities throughout the state and reviewed the corresponding maintenance or rental agreements. Agreements for only 77 machines could be analyzed. Agreements for 25 machines could not be analyzed for various reasons such as maintenance agreements were not maintained or copy count information was unavailable. We obtained copy count information for fiscal year 2002 for each copy machine, if

¹ For purposes of this review, the term "state entities" includes all state departments and their subunits, elected officials, and the legislative and judicial branches.

available. When 2002 information was not available, we obtained the most current information available for a period that allowed us to closely approximate a 12-month period. Based on available information, we calculated the average monthly copies produced during the fiscal year to compensate for high and low periods of usage. We obtained the contract price the entities were paying for maintenance and analyzed each copy machine depending upon the contract type as noted in the sections that follow.

For maintenance agreements where various base levels were available, we calculated the average actual monthly usage and determined the available base level for a particular model on the statewide contract which most closely corresponded to actual usage. We then compared actual contracted maintenance costs to statewide contract maintenance costs that would have been paid had the entity selected a more realistic base level. To analyze rental costs and maintenance agreements where only one base level was available, we compared the actual average monthly copies to another copy machine model which had a specified base that corresponded more closely to the actual usage. We then calculated the estimated annual maintenance or rental cost of the model with the more appropriate base level and compared that cost to the amount the entity was actually incurring.

Most maintenance and rental agreements were not cost-effective due to excessive base levels or non-statewide contracts

Maintenance and rental agreements were not cost-effective for 66 of 77 (86 percent) copy machines we reviewed. We estimate entities could have saved \$43,900 of the \$108,100 annual maintenance expenditures for these copy machines had more cost-effective agreements been used. Most entity personnel surveyed told us they purchased maintenance agreements for copy machines, and 90 percent indicated monthly copy count information had been maintained. To determine cost-effectiveness, survey respondents told us they periodically reviewed and compared lease, rental, and/or maintenance agreements. However, entity personnel did not have any documentation to support their analysis for most items reviewed. Table 1.1 depicts our estimates of savings which could have been realized had more cost-effective agreements been used.

Table 1.1: Estimated Savings for Copy Machine Maintenance or Rental Agreements

| Type of Agreement | Copy machines tested | Estimated actual cost | Estimated annual savings |
|-----------------------------------------------------------------------------------|----------------------|-----------------------|--------------------------|
| Other than statewide contracts | 30 | \$36,300 | \$20,800 |
| For copy machines no longer available for purchase through the statewide contract | 29 | 39,800 | 11,200 |
| For copy machines available for purchase through statewide contract | 15 | 20,000 | 9,700 |
| Rentals | 3 | 12,000 | 2,200 |
| Totals | 77 | \$108,100 | \$43,900 |

Source: SAO analysis of maintenance agreements.

Agreements purchased outside the statewide contract proved more costly

None of the agreements for 30 copy machines for which maintenance was purchased outside the statewide contract were cost-effective. We estimate \$20,800 (57 percent) of the \$36,300 spent on maintenance agreements could have been saved by using the statewide maintenance contract. The entities reviewed had no documentation to support whether options such as the statewide contract had been considered when procuring maintenance agreements. We believe sound business practices dictate considering the cost-effectiveness of alternatives through the use of cost benefit analyses.

Entity personnel could not provide documentation to support the most cost-effective maintenance agreements had been obtained. Some personnel also could not explain why the statewide contract had not been used. For example, personnel from one entity stated they did not know maintenance could be purchased from a statewide contract. Personnel from another entity stated they did not know why a separate contract existed because it had been set up by a former employee. Three of the entities reviewed (16 of the 30 copy machines reviewed) were exempt from the state purchasing requirements. Personnel from two of these three entities indicated they did consider maintenance through the statewide contract. Personnel from the third entity indicated they thought the contract was through the statewide contract because it was with the same vendor.

The following example illustrates how one entity could have reduced maintenance costs if personnel had used the statewide contract. The agreement included all of the copy machines of the state entity under a single combined base level maintenance agreement. The contractor also provided services through the statewide contract. The official responsible for the copy machines stated the contract represented a modified version of the statewide contract. However, the statewide contract had not provided for grouping copy machines and setting a combined base level for multiple copy machines. In this example, the state entity had 8 and 13 copy machines during fiscal years 2002 and 2003, respectively, included on one maintenance agreement. The entity could have saved an estimated \$13,700 and \$9,000 during fiscal years 2002 and 2003, respectively, had they purchased maintenance through statewide contracts for each copy machine separately with base levels that more closely corresponded to the actual usage amount.

Entities incurred unnecessary costs even when various base levels were available

We found 22 of 29 (76 percent) maintenance agreements were not cost-effective² for copy machine models which were no longer available for purchase on the statewide contract. We estimate entities could have saved \$11,200 of the \$39,800 annual maintenance expenditures for these copy machines had more cost-effective agreements (e.g., a more appropriate base level) been used.

The following example illustrates how one entity could have reduced copy machine maintenance costs if a more effective agreement had been used. One maintenance agreement, costing approximately \$3,900 annually, had a base level of 25,000 copies per

²Sixteen different state entities were represented by these 22 maintenance agreements.

month; however, actual monthly usage averaged approximately 9,800 copies. We determined a maintenance contract with a base level of 10,000 copies per month would have resulted in an estimated annual savings of \$2,200.

Sound business practices dictate frequent monitoring of copy machine meter readings and the performance of periodic documented cost analyses to ensure the appropriate maintenance agreement base level is selected. Entities without cost-effective maintenance agreements responded to our survey stating copy count numbers were maintained and periodically reviewed and compared to maintenance agreements to ensure the most cost-effective agreements were being used. However, a cost analysis could not be provided by the entities for 20 of the 22 ineffective maintenance agreements.

The statewide contract provides base level options for most models, allowing the entities to select a base level which best corresponds to their actual/expected usage amounts.

Statewide contract did not offer base level options for all copy machines

Entities could have annually saved an estimated \$9,700 (48 percent) of the \$20,000 maintenance costs for 11 of 15 copy machines tested where only one base level was available. In most cases, state entities paid more for maintenance agreements when the state contract offered only one base level than if various base levels had been available because the entities were not meeting the base level usage. Sound business practices dictate state contracts provide multiple copy base levels that allow state entities to select the appropriate base level based on actual or anticipated actual usage.

The following example illustrates how one entity could have reduced copy machine maintenance costs if personnel could have selected an appropriate base level. One copy machine reviewed was a model with a maintenance agreement base level of 55,000 copies per month. We calculated the average monthly usage of the copy machine to be only 6,385 copies. The entity could have saved an estimated \$2,300 of \$2,970 annually had there been various base levels available for the maintenance contract.

Statewide contract did not offer base level options for rented copy machines

Our review of 3 rented copy machines disclosed an estimated savings of \$2,200 could have been realized if the base level specified in the rental agreement more closely represented actual usage. However, the statewide contract offered only one base level per model for rental copy machines. We found two of three rental copy machines tested had base levels specified in the contracts which were higher than the average actual usage. Sound business practices dictate using a documented cost benefit analysis to determine the most cost-effective base levels and alternative of procuring copy machines.

State entities were not always aware of option to change base levels

Our review of statewide maintenance agreements disclosed most state entities were unaware they were allowed to change base levels. One entity representative stated the

copy machine maintenance vendor would not allow the base level to be reduced. However, OA personnel stated base levels could be changed or the contract could be canceled and a new contract entered into. In addition, four of five vendors on the statewide contract stated they allow state entities to change base levels at any time.

Although maintenance agreements did not specifically address changing base levels, they did allow for cancellation of the contract. Sound business practices dictate the statewide contract clearly provide the circumstances under which modifications may be made.

Conclusions

Copy machine maintenance costs could have been reduced through better contracts and cost analyses. Agreements which provided various base levels would have allowed state entities to select a more cost-effective base level when purchasing maintenance agreements. Additionally, entities could have identified potential savings through periodic documented monitoring of copy machine usage and comparison to the terms of maintenance agreements. A documented analysis of usage and cost benefit analysis of appropriate alternatives would help ensure the most cost-effective alternative was selected. More awareness and clearer terms and conditions of maintenance agreements could also lead to more efficient spending.

Recommendations

We recommend the Commissioner, Office of Administration:

- 1.1 Ensure the statewide contracts for maintenance agreements for copy machines available to purchase on statewide contract and copy machine rental agreements offer multiple base levels.
- 1.2 Develop cost analysis tools for state entities to use when evaluating or determining the appropriate maintenance or rental agreement base level.
- 1.3 Direct non exempt state entities to obtain guidance or a waiver prior to entering into a maintenance agreement other than the mandatory statewide contract.
- 1.4 Ensure the terms and conditions of the statewide contract specifically address whether a state entity can change the base level.

Agency Comments

In a letter dated December 8, 2003, the Deputy Commissioner of Administration provided the following comments.

- 1.1 We agree. OA/PMM is currently re-bidding the statewide copier acquisition/maintenance contract, which expires June 30, 2004. Multiple base levels will be incorporated into the contract.*

1.2 *OA/PMM will determine the feasibility of cost analysis tool development. Current manpower constraints limit our abilities to develop such tools.*

1.3 *OA/PMM issues a notification of statewide contract which states the following:*

The use of this contract is mandatory for all state agencies. Local Purchase Authority shall not be used to purchase supplies/services included in this contract unless specifically allowed by the contract terms.

If a state entity's maintenance needs fall outside of the statewide contract, OA/PMM has issued instructions that they are to maintain written documentation of such and then satisfy their unique maintenance needs in accordance with their local procurement authority.

1.4 *We agree. OA/PMM will highlight this option in the new contract. However, we believe the current contracts allow state entities to change their base level by exercising the cancellation clause of the contract.*

2. OA Needs to Improve Its Oversight of State Computer Hardware and Peripherals Purchases

OA did not ensure the lowest possible price was obtained because of infrequent statewide contract competitive bidding. In addition, OA did not ensure annual audits of the contractor's billing were conducted as required by the contract. OA's oversight is needed since the prices on this type of equipment fluctuate frequently and the prime vendor contract allows for the adjustment of these prices accordingly.

Background

The state procures computer hardware and peripherals through a contractor (prime vendor), which purchases equipment from the manufacturer or other wholesalers and then resells it to the state at a specified percentage over cost. State entities spent approximately \$40 million during fiscal year 2003 on desktop computers and peripherals; approximately \$26.5 million of these purchases were made through the prime vendor contract. Most state entities are required to use the prime vendor contract to purchase desktop and laptop computers and peripherals. OA personnel indicated the prime vendor provides a useful service that saves considerable time.

Prior to the prime vendor contract, OA personnel estimated the state had approximately 70 individual contracts for computer hardware and peripherals. OA personnel also noted multiple contracts for these products are not feasible or efficient because the individual contracts become outdated very quickly and it is difficult to award bids to multiple vendors when the criteria to be used considers the lowest and best bid. OA acknowledged the volatility of the market causes prices on this type of equipment to fluctuate frequently and the prime vendor contract allows prices to adjust accordingly. In addition, with a multitude of brands already in use throughout the state, upgrades and compatibility requires utilizing the same brand as the original equipment.

Infrequent bidding hindered competitive prices

OA extended the previous statewide contract for computer hardware and peripheral equipment for almost 7 years without competitive bids and, as a result, did not ensure it obtained the lowest prices possible. An OA official stated they were trying to develop a Request For Proposal that would require vendors to accommodate the development of the infrastructure and Business-to-Business/Government Initiative, which would compliment the state's Electronic-Government Initiative through paperless order processing and other services. In addition, OA personnel stated more time than anticipated was needed to research this initiative because the state did not have the necessary expertise. However, without affording the opportunity for other vendors to bid for the prime vendor contract, the state may have been paying more than necessary, especially considering the same vendor reduced its bid costs by 1 percent on the current contract which was awarded effective July 1, 2003.

OA had three renewal options to extend the original October 1996 2-year contract in 1-year increments, for a total of 5 years. OA initially extended the contract for 15 months (e.g., October 2001 through December 2002) and then again to June 30, 2003. As a result, OA extended the contract 21 months beyond the maximum allowed by the contract. If OA had obtained

competitive bids even 1 year earlier and realized the same 1 percent reduction from the vendor, the state would have saved an estimated \$265,000 on the \$26.5 million of equipment purchased from this vendor.

OA did not ensure annual audits of the prime vendor contract were performed as required

OA did not adequately monitor the prime vendor contract because it did not enforce that annual compliance audits were conducted of the prime vendor's financial accounting system, internal controls, and pricing data as required by the contract. Pricing is based on a set percentage above the prime vendor's cost which fluctuates frequently. State entities had no way to verify the contracted amount was paid because the contractor's cost was not available. The state spent approximately \$34.7 million and \$26.5 million through the prime vendor contract during fiscal years 2002 and 2003, respectively, on computer equipment and peripherals. The most recent audit performed was for the 12-month period ended September 30, 2001. That audit concluded that the prime vendor was in compliance with the terms and conditions of the contract specifically related to pricing. OA did not follow up on the audit requirement until after we requested a copy of the most current audit report. Furthermore, OA issued an amendment on July 28, 2003, extending the scope of the audit through June 30, 2003. The OA Division of Purchasing and Materials Management Director acknowledged OA did not ensure an annual compliance audit had been conducted as timely as required.

Conclusions

The state could have potentially reduced the costs for computer hardware and peripherals by more frequent bidding of the state contract. More frequent bidding in this area where technology rapidly changes would help ensure the state is obtaining the best price possible.

OA also had no assurance the contractor was in compliance with the terms of the contract without periodically monitoring the contract. Annual compliance audits are necessary to ensure all parties comply with the terms and conditions of the contract.

Recommendations

We recommend the Commissioner, Office of Administration:

- 2.1 Conduct more timely bidding of the prime vendor contract to ensure the state is receiving the best available prices on computer hardware and peripherals.
- 2.2 Ensure annual compliance audits of the prime vendor contract are conducted in a timely manner.

Agency Comments

In a letter dated December 8, 2003, the Deputy Commissioner of Administration provided the following comments.

- 2.1 *OA/PMM extended the previous contract to accommodate the development of “infrastructure” and Business-to-Business/Government (B2B/G) performance requirements that were being considered in Missouri’s Electronic-Government Initiative (E-Gov). The Office of Information Technology (OIT) and OA/PMM intended to include certain performance requirements in the PC Prime Vendor bid as a means of continuing the state’s E-Gov initiative through paperless order processing and other related B2B/G transactions. The PC Prime Vendor contract was viewed as an ideal contract for inclusion of these requirements. OA/PMM and the OIT viewed the extension of the existing contract as being in the best interest of the State of Missouri, given the amount of resources required by both the state and vendors to prepare, respond, evaluate and implement a contract of this magnitude. Severe budget cuts precluded full implementation of the E-Gov contract. Therefore the RFP was issued and established without the E-Gov requirements.*

In addition, the PC Prime Vendor contract is structured to ensure the state agencies have access to current technology at current market prices. The offering of multiple manufacturers’ products allows the state agencies to secure competitive quotes from the various manufacturers. OA/PMM also conducts periodic market basket surveys to compare contract pricing with market rates to ensure our contract pricing remains competitive.

- 2.2 *We agree. OA/PMM has placed the requirement for annual audit notification on the calendars of the Director, Assistant Directors, Section Manager, and Buyer for the Prime Vendor contract.*